Claim Amendments:

1. (Currently amended) A computer controlled method of analyzing a network, wherein the network has a plurality of network segments, the method comprising:

identifying segment addresses of virtual private network segments in the network, wherein pairs of segment addresses define individual virtual private network segments;

obtaining statistical data associated with each identified segment address in the network, the statistical data representing more than one type of statistic obtained from each identified segment address; and

analyzing the obtained statistical data to identify similar statistical data corresponding to the pairs of segment addresses.

2. (Original) The method of claim 1, wherein the step of analyzing the obtained statistical data further comprises the steps of:

identifying potential pairs of segment addresses;

obtaining refined statistical data associated with the identified potential pairs of segment addresses; and

confirming that the potential pairs of segment addresses are the pairs of segment addresses based on the obtained refined statistical data.

3. (Original) The method of claim 1, further comprising the step of storing the pairs of segment addresses in a database.

4. (Currently amended) The method of claim 1, wherein the step of obtaining statistical data associated with each identified segment address in the network, further comprises the step of creating a statistical fingerprint for each identified segment address.

5. (Original) The method of claim 4, wherein each statistical fingerprint comprises inverse pairs of statistics.

6. (Original) The method of claim 4, wherein the step of creating statistical fingerprints further comprises the step of aggregating a predetermined set of core statistics.

7. (Original) The method of claim 6, wherein the core statistics comprises at least one of number of bytes sent/received and number of send/receive errors.

8. (Original) The method of claim 1, wherein the statistical data comprises at least one of number of bytes sent/received and number of send/receive errors.

9. (Original) The method of claim 1, wherein the step of obtaining statistical data associated with each identified segment address further comprising the step of polling network devices containing segment addresses during a predetermined interval.

10. (Original) The method of claim 9, wherein each network device comprises a router.

11. (Original) The method of claim 9, wherein each segment address comprises a data link circuit identifier.

12. (Original) The method of claim 1, wherein each segment address comprises a data link circuit identifier.

13. (Original) A computer-readable medium having computer-executable instructions for performing the steps recited in claim 1.

14. (Currently amended) A computer controlled method of analyzing a network, wherein the network has a plurality of network segments, the method comprising:

receiving segment addresses of selected network segments in the network, wherein each segment includes at least a portion spanning a public switched network and wherein each selected network segment is defined by pairs of segment addresses;

obtaining statistical data associated with each identified segment address in the network, the statistical data representing different types of statistics;

analyzing the obtained statistical data to identify similar statistical data; and

identifying the pairs of segment addresses corresponding to the selected network segments, based on the identified similar statistical data.

15. (Currently amended) The method of claim 14 further comprising the steps of:

obtaining refined statistical data associated with the identified ~~potential~~ pairs of segment addresses; and

confirming that the ~~potential~~ pairs of segment addresses are the pairs of segment addresses based on the obtained refined statistical data; and

storing the pairs of segment addresses in a database.

16. (Currently amended) A method for identifying virtual private network paths, comprising the steps of:

identifying data link connection identifiers of one or more virtual private network paths;

creating a list of unmatched data link connection identifiers;

polling network devices associated with the datalink connection identifiers for core statistics that represent multiple types of statistical data collected by the network devices;

creating individual fingerprints for each datalink connection identifier based upon the core statistics;

matching a fingerprint of each datalink connection identifier with a corresponding fingerprint of another datalink connection identifier; and

identifying one or more virtual private network paths based upon matching fingerprints of the datalink connection identifiers.

17. (Original) The method of claim 16, wherein the step of polling further comprises the step of polling the network devices at predetermined intervals.

18. (Original) The method of claim 16, wherein the step of creating individual fingerprints further comprises the step of creating individual fingerprints by utilizing inverse pairs of statistics.

19. (Original) The method of claim 16, wherein the step of matching fingerprints further comprises matching core statistics of one end of a data link connection identifier with inverse core statistics at another data link connection identifier.

20. (New) A computer-readable medium containing instructions for controlling a computer system to determine connections between devices of a network, by a method comprising:

providing an indication of devices of the network;

collecting statistical data associated with each device, the statistical data representing operation of a device over a time interval;

identifying devices that are potentially connected based on the collected statistical data; and

confirming that potentially connected devices are connected when a confirming collection of statistical data associated with each device over a shorter time interval indicates a connection.

21. (New) The computer-readable medium of claim 20 wherein the confirming collection occurs repeatedly over increasingly shorter time intervals.

22. (New) The computer-readable medium of claim 21 wherein when a confirming collection is inconsistent with potentially connected devices being connected, indicating that the potentially connected devices are not connected.

23. (New) The computer-readable medium of claim 20 wherein the statistical data includes the number of bytes sent/received and the number of send/receive errors.

24. (New) The computer-readable medium of claim 20 wherein the statistical data includes the number of send/receive errors.

25. (New) The computer-readable medium of claim 20 wherein the connections are virtual private network paths.

26. (New) The computer-readable medium of claim 20 wherein the confirming accounts for skew in time of collecting the statistical data from different devices.

27. (New) The computer-readable medium of claim 20 wherein the statistical data is collected by polling a device at time interval boundaries.

28. (New) The computer-readable medium of claim 20 wherein devices are potentially connected when their statistical data is within a threshold.

29. (New) The computer-readable medium of claim 28 including increasing the threshold when devices are not identified as potentially connected.

30. (New) A computer-readable medium containing instructions for controlling a computer system to determine connections between devices of a network, by a method comprising:

providing an indication of devices of the network;

collecting statistical data associated with each device, the statistical data representing at least two types of data; and

identifying devices that are potentially connected based on the collected statistical data.

31. (New) The computer-readable medium of claim 30 wherein the types of statistical data include the number of bytes sent/received and the number of send/receive errors.

32. (New) The computer-readable medium of claim 30 wherein the types of statistical data include the number of send/receive errors.

33. (New) The computer-readable medium of claim 30 including confirming that potentially connected devices are connected when a confirming collection of statistical data associated with each device indicates a connection.

34. (New) The computer-readable medium of claim 33 including repeatedly performing confirming collections at increasingly shorter time intervals.

35. (New) The computer-readable medium of claim 34 wherein when a confirming collection is inconsistent with potentially connected devices being connected, indicating that the potentially connected devices are not connected.

36. (New) The computer-readable medium of claim 30 wherein the connections are virtual private network paths.

37. (New) The computer-readable medium of claim 30 wherein devices are potentially connected when their statistical data is within a threshold.

38. (New) The computer-readable medium of claim 37 including increasing the threshold when devices are not identified as potentially connected.